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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,019

12/15/2003

Gary Lynn Hanley

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BUCKINGHAM, DOOLITTLE & BURROUGHS, LLP
3800 EMBASSY PARKWAY
SUITE 300
AKRON, OH 44333-8332

EXAMINER

OMGBA, ESSAMA

ART UNIT

PAPER NUMBER

3726

NOTIFICATION DATE

DELIVERY MODE

02/04/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPDOCKETAKRON@BDBLAW.COM
MMiller2@BDBLAW.COM
DHrina@BDBLAW.COM

Office Action Summary	Application No. 10/736,019	Applicant(s) HANLEY, GARY LYNN	
	Examiner Essama Omgba	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no disclosure in the specification as originally filed of the process being limited to removing “non-degraded” thermal barrier coatings.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite in that it is not clear if the word "non-degraded" is used to refer to components that have not been subjected to any wear. According to the Merriam-Webster online dictionary, one of the generally accepted meaning of the word “degraded” is “characterized by degeneration of structure or function”. The specification does not use the term “non-degraded”, and is silent as to the meaning of the term. If

Art Unit: 3726

Applicant is using the term “non-degraded” to mean that the process is limited to components that are not characterized by degeneration of their structure or function (or that have not been subjected to any wear), then Applicant should clearly state that fact on the record.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 and 28-30, *as best understood by the examiner*, are rejected under 35 U.S.C. 103(a) as being unpatentable over Esser et al. (US 2003/0148710) in view of Sangeeta et al. (US Patent 5,976,265).

With regards to claims 1-7, Esser et al. discloses a process of removing aluminide-containing material or a thermal barrier coating from a metallic substrate using a blasting process as non-abrasive process, see paragraphs [0033], [0043] and [0092]-[0098], wherein the blasting process could be carried at room temperature (non-degraded coating), see paragraph [0098]. Although Esser et al. does not specifically disclose the non-abrasive blasting process being one that uses an air jet, however Sangeeta et al. discloses a process for removing an aluminide-containing material from a metallic substrate surface (col. 1, lines 11-19 and col. 2, lines 26-28), the method comprising directing an air jet at the aluminide-containing material on the substrate

Art Unit: 3726

surface of the component, the jet comprising non-abrasive particulate media such as glass beads, the average particle size being less than 500 microns, the air jet being directed at the aluminide-containing material at a pressure less than about 40 psi sufficient to remove the aluminide-containing material but insufficient to damage the substrate surface, see column 5, lines 54-67, column 7, lines 53-67 and column 8, lines 1-4. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have use the non-abrasive blasting process taught by Sangeeta et al., in the process of Esser et al., in order to remove thermal barrier coatings without damaging the underlying material.

For claims 28-30, Applicant should note that such bond coatings are conventional in the art.

7. Claims 8-27 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Esser et al. and Sangeeta et al.

With regards to claim 8-27, Applicant, at pages 1-3 of the specification to be known as AAPA, discloses known methods of removing thermal barrier coatings from turbine blades as well as from laser drilled cooling holes in turbine hot section components. Known methods include waterjet blasting to remove barrier coating from components during manufacturing and repair, including air-cooled components, which creates wear and erosion of the underlying substrate. AAPA does not disclose directing an air jet at the thermal barrier coating on the substrate coating, the jet containing non-abrasive particulate media and being emitted from a nozzle at a low pressure

Art Unit: 3726

insufficient to damage the substrate surface. However Esser et al. teaches a non-abrasive blasting process to remove thermal barrier coatings, see paragraphs [0033], [0043] and [0092]-[0098], wherein the blasting process could be carried at room temperature ("non-degraded" coating), see paragraph [0098]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a non-abrasive blasting process to remove thermal barrier coatings in the method of AAPA, in light of the teachings of Esser et al., in order to remove the thermal barrier coating without damaging the underlying substrate. Although Esser et al. does not specifically disclose the non-abrasive blasting process being one that uses an air jet, however Sangeeta et al. discloses a process for removing an aluminide-containing material from a metallic substrate surface (col. 1, lines 11-19 and col. 2, lines 26-28), the method comprising directing an air jet at the aluminide-containing material on the substrate surface of the component, the jet comprising non-abrasive particulate media such as glass beads, the average particle size being less than 500 microns, the air jet being directed at the aluminide-containing material at a pressure less than about 40 psi sufficient to remove the aluminide-containing material but insufficient to damage the substrate surface, see column 5, lines 54-67, column 7, lines 53-67 and column 8, lines 1-4. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have use the non-abrasive blasting process taught by Sangeeta et al. in the process of AAPA/Esser et al., in order to remove thermal barrier coatings without damaging the underlying material.

For claims 31-36, Applicant should note that such bond coatings are conventional in the art.

Response to Arguments

8. Applicant's arguments filed October 16, 2008 have been fully considered but they are not persuasive.

In response to Applicant's argument that neither Esser nor Sangeeta teach a method of using a nonabrasive media within an air jet to remove a thermal barrier coating that has not been purposefully degraded before the removal, the examiner respectfully disagrees. As disclosed by the Esser reference in paragraph [0098], coating layers can be removed at room temperature without cooling. The examiner submits that it is known to remove such coatings from substrates using a known blasting process, wherein the coating has not been purposefully degraded before removal. The examiner maintains that a *prima facie* case of obviousness has been established in the instant application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

Art Unit: 3726

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Essama Omgba/
Primary Examiner, Art Unit 3726

eo
February 1, 2009